

the legs are long ; the knees are brown ; the feet and the tips of the shanks are black.

55. *Aphis Fragariæ*, n. s.

The viviparous wingless female. The body is pale green, oval, and convex : the head is pale yellow : the feelers are also pale yellow, black towards the tips, and longer than the body : the eyes are dark red : the mouth is pale yellow with a black tip : the nectaries have the same colour and are as long as one-fifth of the body : the thighs are pale green ; the shanks are pale yellow ; the feet and the tips of the shanks are black. It much resembles the preceding species, but the tubercles at the base of the feelers are less developed ; the feelers are longer than the body ; the fourth joint is shorter than the third ; the fifth than the fourth ; the sixth is about one-third of the length of the fifth ; the seventh is as long as the third. In the beginning of the spring it is hatched from the eggs which are attached to the underside of the leaves of the strawberry (*Fragaria vesca*) ; sometimes six eggs and upwards are beneath one leaf.

The viviparous winged female. It much resembles the wingless female, but possesses the usual difference in structure, and in the darker colour of the chest, &c. : the wings are like those of the preceding species.—*Variation in the veins of the wing.* The lower branch of the second fork is obsolete except at its source.

The oviparous wingless female. This appears in November ; it is rather smaller and more slender than the viviparous female ; the abdomen is slightly produced at the tip, and the hind-shanks are dilated.

The winged male. It pairs with the oviparous female in the middle of November ; it much resembles the winged female, but the head, the chest, the feelers, the tips of the thighs, and the hind-thighs from the middle to the tips are darker.

[To be continued.]

XLIV.—*Algæ Orientales*:—*Descriptions of new Species belonging to the genus Sargassum.* By R. K. GREVILLE, LL.D. &c.*

[Continued from p. 277.]

[With a Plate.]

WIGHTIANÆ.

7. *Sargassum lanceolatum* (nob.) ; caule angulato, ramosissimo ; foliis lanceolatis, acutiusculis, minute dentatis ; vesiculis sphæ-

* Read before the Botanical Society of Edinburgh, November 9, 1848.

ricis, petiolatis, petiolis brevibus, planis, dilatatis; receptaculis compressis, subcuneatis, racemosis, ad apicem late denticulatis.

Hab. in mari Peninsulæ Indiæ Orientalis; Wight.

Root I have not seen. *Stem* probably 1–2 feet long, angular, and nearly as thick as a crow-quill; in the portion which I possess, giving off branches at intervals of half an inch; these branches towards the base are 4–6 inches long, spreading, becoming gradually shorter upwards, so as to render the general outline pyramidal; all of them thickly clothed with ramuli about an inch in length, and bushy with leaves, vesicles and receptacles. *Leaves* shortly petiolate, about an inch long, very numerous, lanceolate or linear-lanceolate, somewhat acute, repando-denticulate, furnished with scattered pores and a strong nerve which disappears below the apex. *Vesicles* intermixed with the receptacles, about the size of hemp-seed, spherical, often slightly margined, supported on dilated foliaceous stalks seldom much more than a line in length, but occasionally on stalks a quarter of an inch long, more broadly foliaceous and nerved. *Receptacles* axillary, a line or a line and a half long, forming minute more or less divided clusters; they are linear-cuneate, subcylindrical at the base, compressed upwards, and furnished with broad, sharp teeth at the sides and apex. *Colour* very dark red-brown. *Substance* when dry somewhat firm, cartilaginous and opaque.

This species has so great a resemblance at first sight to another, which I received from Dr. Wight, and which stands in the herbarium as my No. 7, that they were mixed together, and it was not until I examined them critically that they were perceived to be essentially distinct. Of the present species I only possess a solitary specimen, and that not an entire one, there being only about twelve inches of the upper extremity; at the same time it is in so satisfactory a state, that I venture with some confidence to regard it as undescribed.

8. *Sargassum acanthicarpum* (nob.); caule elongato, filiformi, subangulato, ramosissimo; foliis lineari-lanceolatis, uninerviis, profunde dentato-serratis; vesiculis subsphæricis, petiolatis, planis, dilatatis; receptaculis axillaribus, racemosis, compressis, lineari-cuneatis, grosse et acute dentatis.

Wight in herb. no. 4 & 6.

Hab. in mari Peninsulæ Indiæ Orientalis; Wight.

Entire plant near 2 feet long, with a slender graceful appearance. *Root* a small callous disc, from which arise one or more undivided somewhat angular stems, not thicker than a sparrow's quill. The branches begin to be given off in a horizontal manner immediately above the root, where they are 2 or 3 inches long, soon extending to 5 or 6 inches, and then gradually diminishing to the end, thus giving the whole a more or

less oblong-acuminate outline. Towards the base, the branches appear to be frequently in pairs; two being given off near together, then after a longer space two more and so on, but this character is gradually lost, and the upper branches become irregularly alternate, at intervals of half an inch or more. These branches produce the fruit-bearing ramuli at intervals of a few lines; they are an inch or more in length next the stem, and diminish insensibly to the extremity of the branch. *Leaves*: those arising from the stem close to the root, ovate-oblong, sessile; those on the branches about an inch in length, linear-lanceolate, becoming gradually shorter and narrower towards the extremity, deeply and irregularly dentato-serrate, furnished with minute pores and a narrow nerve which is very faint towards the apex. *Vesicles* numerous, from the size of a large pin's head to that of hemp-seed, subglobose, often slightly elliptical, on stalks a line or more in length; but these stalks have a frequent tendency to pass into leaves; in some specimens nearly all are foliaceous, and several lines long, the vesicles themselves being then more or less elliptical, winged, and often apiculate. *Receptacles* 1 or 2 lines long, linear-cuneate, compressed, sometimes subtriquetrous, bristling at the lateral and terminal margin with large, very acute teeth. Generally the raceme is composed of but few simple receptacles, but occasionally they are proliferous, as shown in the plate. The terminal receptacle is often large and the lateral or lower ones very small. *Colour* a dark reddish brown when dry; a rich yellow-brown in transmitted light. *Substance* somewhat membranaceous and translucent, but rigid in the dry state.

This species, to which I at one time attached the provisional name of *erinaceum*, is distinguished for its beautiful foliage and the very slender branches, which indeed are scarcely thicker than a hog's bristle. The light and graceful character of the whole plant is increased by the dentation of the leaves, which is sometimes so marked even to the naked eye, as to give them a lacinate character.

9. *Sargassum dumosum* (nob.); caule subplano, distiche ramoso; foliis lineari-lanceolatis, uninerviis, inferne præcipue attenuatis, superne plus minusve dentatis; vesiculis ellipticis, petiolatis, petiolis elongatis, dilatatis, foliaceis; receptaculis axillaribus, clavatis, subcompressis, dentatis, racemosis.

Hab. in mari Peninsulæ Indiæ Orientalis; Wight.

Root I have not seen, the only specimen in my possession being about a foot of the upper portion of the plant. In this, the *stem* (?) is about a line broad, flat or nearly so, and giving off branches 5 or 6 inches in length in a distichous manner, at in-

tervals of half an inch to an inch. These branches produce others, which are more or less subdivided in their turn, so as to give the ramification generally a bushy fasciculate character. *Leaves* an inch long, somewhat more than a line broad, linear-lanceolate, acute, gradually attenuated from the middle to the petiole, very irregularly toothed, and that almost exclusively in the upper part, rarely subentire, furnished with pores and a slender nerve which disappears below the apex. *Vesicles* larger than the seed of *Lathyrus odoratus*, accompanying the receptacles, elliptical, often mucronate, supported on flat stalks nearly half an inch long, sometimes becoming even longer and decidedly foliaceous. *Receptacles* axillary, 1-2 lines long, club-, or linear-wedge-shaped, somewhat compressed, often incurved, toothed, especially at the outer margin and apex, and forming a rather lax sparingly divided raceme. *Colour* blackish brown in the dry state. *Substance* rigid.

The solitary specimen from which I have drawn up the above description was mixed with *Sargassum pyriforme*, Ag., to which it bears no inconsiderable resemblance in general habit, and especially in the form of the vesicles. Both the leaves and fructification, however, at once separate it from that plant. With *Sargassum Swartzii*, Ag., it has a nearer affinity, but is readily distinguished by the much shorter leaves and elongated, toothed receptacles.

EXPLANATION OF PLATE XIII.

Sargassum lanceolatum.

Fig. 1. Termination of a branch.

— 2. Leaf, vesicles and raceme, slightly magnified.

— 3. Vesicles.

— 4 & 5. Racemes, magnified; one of the receptacles terminating in a foliaceous expansion and vesicle.

Sargassum acanthicarpum.

Fig. 1. Termination of a branch.

— 2. A portion with receptacles, one of the leaves being converted into a vesicle.

— 3. Leaves from the base of the stem close to the root.

— 4. Vesicles.

— 5. Leaf and raceme.

— 6. Portion of a raceme, showing the proliferous state in which it is not unfrequently found. The two last magnified.

Sargassum dumosum.

Fig. 1. Portion of a branch.

— 2. Leaf and raceme.

— 3. Vesicles; one of them being supported on an abortive receptacle.

— 4. Raceme. 2-4 magnified.